



Optimization Opportunities By Building Type

Examples of optimization opportunities available by building type:

The examples below are results of applying optimization strategies. Those strategies may include: Occupancy based controls, Demand Control Ventilation, Static Pressure reset, discharge temperature reset, economizer optimization, single zone occupancy based VAV application, simultaneous heating/cooling reduction, schedule modification, fume hood control optimization, etc...

446k sq. ft. High School (awaiting cooling performance checks to finalize)

\$45,658 in utility savings thus far. Lack of proper optimization and formal commissioning of controls of a system installed 10 years ago provided these results. A major controls upgrade of ~500k is the best remedy. These savings plus incentives provides a ~10 year payback. If operational and cost avoidance savings applied, this is 4-8 year payback. (The cooling season was not evaluated yet). 10% Gas savings, 2% Elec savings and 2% demand savings from utility bills identified thus far.

264k sq. ft. Middle School (Implemented)

\$16,897 in utility savings. The implementation cost for these measures was \$18,775 resulting in a 0.9 year payback. 8% Gas savings, 7% Elec savings from utility bills realized.

100k sq. ft. Elementary School (Implemented)

\$10,103 in utility savings. The implementation cost for these measures was \$29,300 resulting in a 2.9 year payback. 6% Gas savings, 8% Elec savings from utility bills realized.

138k sq. ft. Office Complex (Implemented)

\$12,833 in utility savings. The implementation cost for these measures was \$3,850 resulting in a 0.3 year payback. 1% Gas savings, 8% Elec savings from utility bills realized.

81k sq. ft. Higher Education – Science Building (still awaiting approval from the State)

\$114,102 in utility savings anticipated. The initial estimated implementation cost for these measures is \$1,346,405 resulting in a simple payback of 11.8 years. These were very conservative savings numbers. 15% Gas savings, 7% Elec savings from utility bill anticipated. The science rooms were repurposed as classrooms but the ventilation system was not modified accordingly.

155k sq. ft. Industrial Complex, Mixed Use – Laboratory Spaces (Implemented)

\$29,562 in utility savings anticipated. The implementation cost for these measures was \$109,967, with a \$17,101 incentive and \$5,000 in operational savings, the resultant simple payback was 3.2 years.

62k sq. ft. Shared Higher Education/High School – Science Building (Implemented)

\$32,890 in utility savings anticipated. The implementation cost for these measures was \$205,458, with a \$16,745 incentive, the resultant simple payback was 5.7 years. This CUSTOM project also replaced a dilapidated temperature and fume hood control system.